REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is made obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 21-22 UNDER 35 U.S.C. § 103

Claims 21-22 stand rejected as being unpatentable over the Filepp et al. patent (United States Patent No. 5,758,072, issued May 26, 1998, hereinafter "Filepp") in view of the Elderton et al. patent (United States Patent No. 6,477,572, issued November 5, 2002, hereinafter "Elderton") and the Laiho et al. patent (United States Patent No. 6,097,942, issued August 1, 2000, hereinafter "Laiho") and further in view of the Curtis et al. patent (United States Patent No. 5,774,689, issued June 30, 1998, hereinafter "Curtis"). In response, the Applicants have amended claim 22 into independent form in order to more clearly recite aspects of the present invention. Claim 21 has been cancelled without prejudice.

In particular, the Applicants respectfully submit that Filepp, Elderton, Laiho, and Curtis, singly or in any permissible combination, fail to teach, show or suggest the novel invention of mapping network resources based on network-level characteristics that include at least one of: a network fanout, a network delay, or a network forwarding capacity to produce a network map, as positively claimed in the Applicants' independent claim 22.

The Examiner acknowledges that "Filepp et al. does not specifically disclose mapping said network resources based on said network characteristics to produce network map information" (Office Action, Page 4). The Examiner submits, however, that the admitted gap in the teachings of Filepp is bridged by Elderton. The Applicants respectfully disagree.

By contrast, Elderton teaches generating a topology map based on node-level attributes. For example, Elderton discloses building "a topology map that includes at least one icon representing network objects that have the user-selected attribute value for the attribute" (Elderton, Abstract, emphasis added). Elderton goes on to disclose that an "object" is a term used to refer to "a network resource located at a node," and that an "'attribute' is a given characteristic of the node ..." (Elderton, column 6, lines 17-21, emphasis added). Thus, the attributes on which Elderton bases the topology map are node-level attributes (such as operating system type, available disk space, or the like), and not network-level attributes (such as network delay, network forwarding capacity, or the like), as claimed by the Applicants.

Moreover, even assuming for argument's sake that the teachings of Elderton could be interpreted as disclosing a topology map based on network-level characteristics, Elderton still does not disclose or suggest that such network-level characteristics include network fanout, network delay, and/or network forwarding capacity. At best, the Examiner appears to suggest that the alleged "network-level characteristics" taught by Elderton are "the identity and characteristics of the subnet within which the node is operating, the identity of the router to which the object is connected, and the like" (Final Office Action, Page 7, emphasis added).

Laiho and Curtis likewise fail to teach or suggest these features. Thus, Filepp, Elderton, Laiho, and Curtis fail, singly or in any permissible combination, to teach all of the claimed limitations of the Applicants' claim 22. Specifically, Applicants' claim 22 recites:

> 22. A method for dynamic grouping of clients to support scalable group communications in interactive applications, comprising:
> identifying an application having an application space;
> identifying a plurality of clients of said application such that each of said plurality of clients has a communication interest with said application;
> identifying a communication network that handles communications between said plurality of clients and said application and that includes network resources with network-level characteristics;

mapping said network resources based on said network-level characteristics to produce network map information, wherein the network-level characteristics comprise at least one of: a network fanout, a network delay, or a network forwarding capacity;

partitioning said application space into a plurality of communication interest partitions, each partition of which represents a communication interest of at least one of said plurality of clients;

indexing the plurality of communication interest partitions and said network map information to form a multi-type attribute index structure into one or more client groupings;

grouping said plurality of clients based on their communication interest and on said multi-type attribute index structure; and

forming a hierarchical structure that includes a parent node and at least one control node for communicating data to said plurality of clients such that said hierarchical structure is based on said multi-type attribute index structure and on the client groupings, wherein said parent node establishes a communication overlay that directs communications between said plurality of clients and said application, and said parent node produces a membership list comprising one or more of said plurality of clients having an interest in at least one of the plurality of communication interest partitions, wherein said membership list maps into one or more communication groups to enable distributed communication between said plurality of clients and said application. (Emphasis added)

As discussed above, Filepp in view of Elderton and Laiho and further in view of Curtis simply does not teach, show or suggest all of the claimed limitations of the Applicants' claim 22. As such, the Applicants submit that claim 22 is not made obvious by the teachings of Filepp in view of Elderton and Laiho and further in view of Curtis. Therefore, the Applicants respectfully submit that claim 22 fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder.

II. CONCLUSION

Thus, the Applicants submit that all of the presented claims fully satisfy the requirements of 35 U.S.C. §103. Consequently, the Applicants believe that all of the presented claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 842-8110 x130 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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